

(12) UK Patent Application (19) GB (11)

2 183 437 (13) A

(43) Application published 10 Jun 1987

(21) Application No 8530397

(22) Date of filing 10 Dec 1985

(71) Applicant:
William Ritchie Smith
Barrow Brow, Anna Lane, Bolton by Bowland, Nr. Clitheroe,
Lancashire BB7 4NZ

(72) Inventor:
William Ritchie Smith (Deceased)

(74) Agent and/or Address for Service
Appleyard Lees & Co., 15 Clare Road, Halifax HX1 2HY, West
Yorkshire

(51) INT CL⁴
B68C 3/02

(52) Domestic classification (Edition I)
A1M CD
U1S 1017 A1M

(56) Documents cited
GB 1581777 GB 0353284 US 4209962
US 3910015

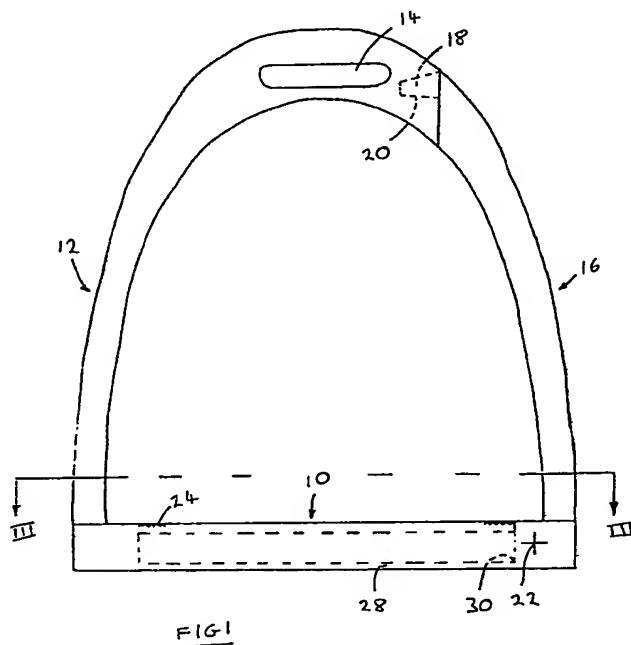
(58) Field of search
A1M
Selected US specifications from IPC sub-class B68C

(54) Safety stirrup

(57) A stirrup is suspended from a strap extending through an opening 14 with an arm 12 extending down and supporting a platform 10 for a rider's foot. If the foot slips and the rider's leg is trapped in the stirrup and presses against an upwardly extending curved member 16, that member pivots outwardly about an axis 22 to allow the foot to leave the stirrup.

The member 16 is integral with a tongue 24 normally extending across the platform 10 which, upon movement of the member 16, is caused to pivot upwardly to force the foot or leg out of the stirrup.

A spring 28 initially exerts its bias on the member 16 to resist outwards pivotal movement of that member.



GB 2 183 437 A

2183437

1/4

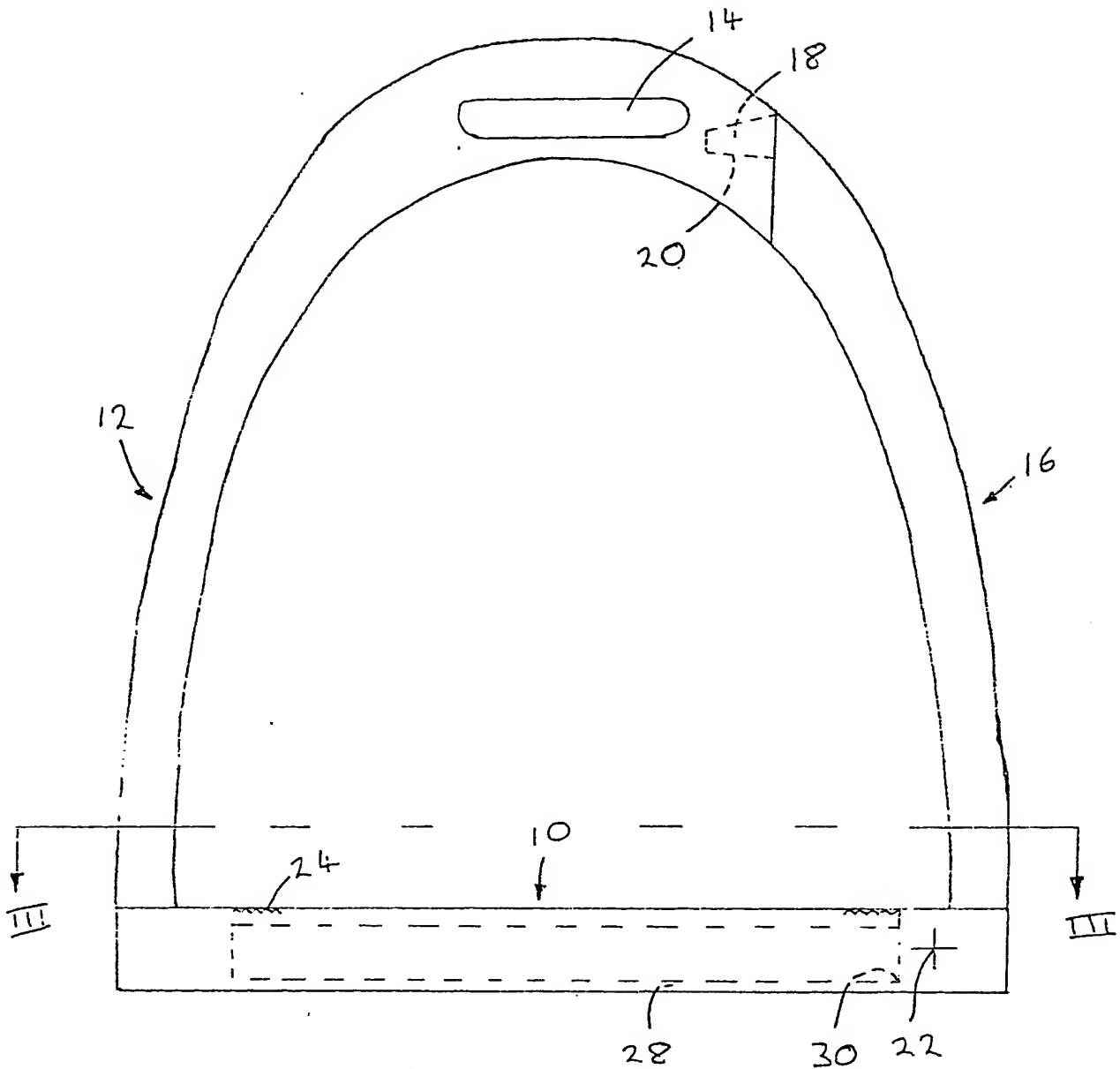
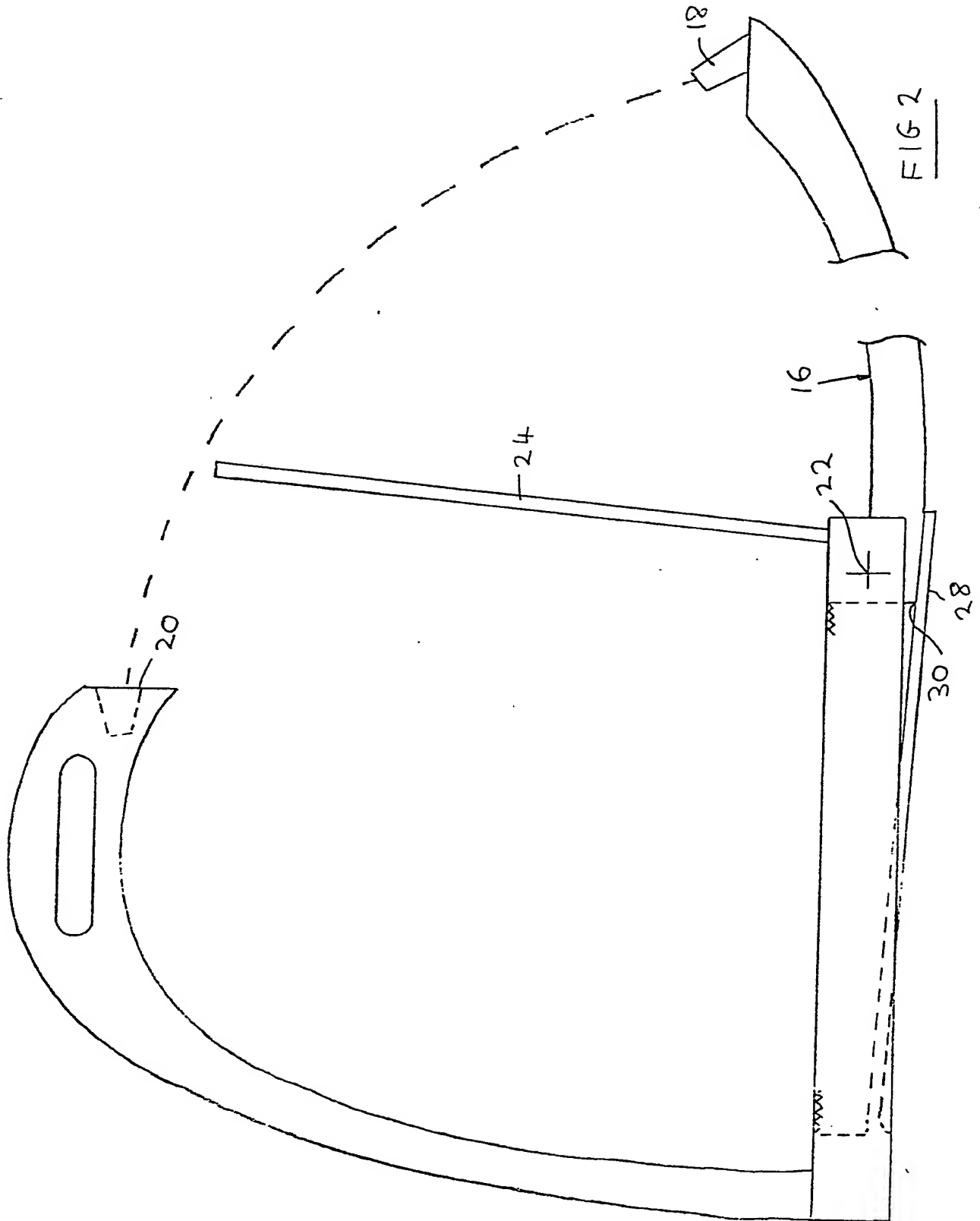


FIG 1

10 DEC 85 303971

2183437

2/4



2183437

3/4

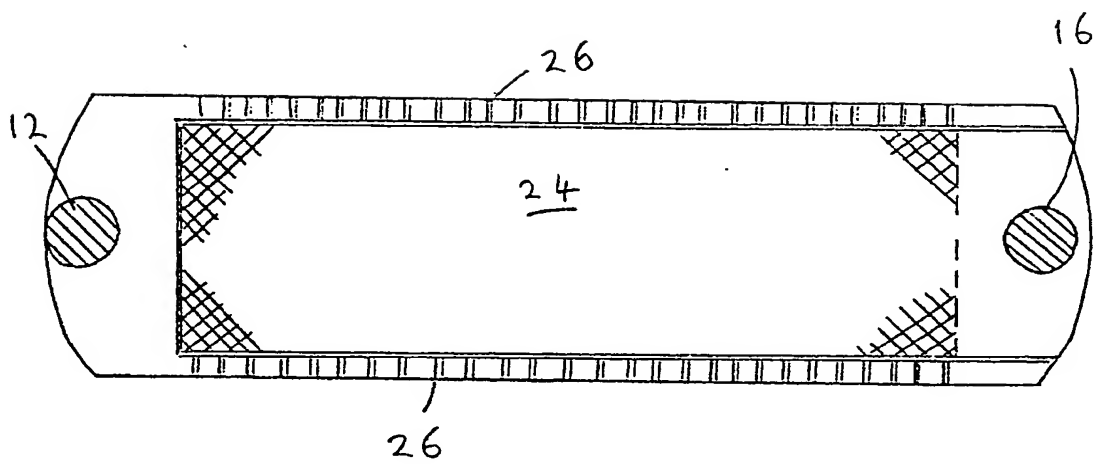


FIG 3

DEC 87 50397

2183437

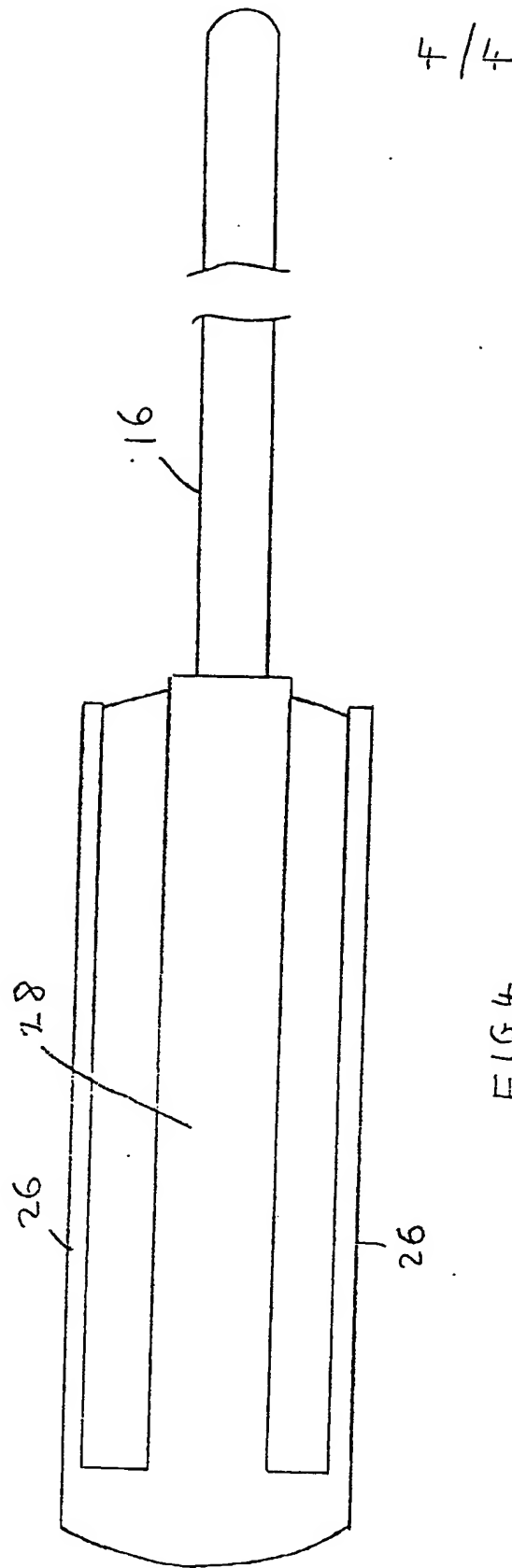


FIG 4

SPECIFICATION

Stirrup

5 The present invention relates to stirrups which are used to support the feet of riders of animals.

Conventional stirrups are suspended from the ends of straps secured to the saddle and comprise a platform to support the foot and a pair of upwardly extending portions from either side of the platform which bend over to meet above the platform and provide a suspension point for the stirrup. When a rider becomes unseated from the saddle it frequently happens that his foot passes through the stirrup or becomes trapped in the stirrup such that the rider is dragged along the ground; as the foot is often wedged into the stirrup the person is unable to free himself until the animal has stopped. Injuries from such accidents are common place and often severe in nature, particularly as the rider's head is placed in the region of the back legs and feet of the animal.

According to one aspect of the present invention, a stirrup includes a foot support region including, in use, upwardly extending portions from either end, the stirrup being capable of being suspended from a location remote from the foot support portion, one of the upwardly extending portions being moveable away from the other upwardly extending portion. With such a stirrup, should the foot or leg of a rider become stuck between the upwardly extending portions then said one of the upwardly extending portions is forced to move away from said other upwardly extending portion to allow the foot or leg to pass out of the side of the stirrup thus freeing the rider and preventing them from being dragged along the ground.

The stirrup may define a complete enclosure when the one of the upwardly extending portions is not moved away from the other such portion whereby the stirrup functions in the same manner as a conventional stirrup during normal use.

Movement of the one upwardly extending portion away from the other such portion may be arranged to be against a resilient bias. This feature may prevent inadvertent movement of the one upwardly extending portion during normal use. Once the one upwardly extending portion has moved a predetermined distance away from the other portion it may be arranged to be resiliently biased away from the other portion.

The stirrup may include a sweeping portion arranged to move through the space defined by the foot support region and the upwardly extending portions when the one upwardly extending portion moves away from the other such portion whereby a foot or leg trapped in the stirrup is able to be pushed out of the stirrup by the sweeping portion. The sweeping portion may be located in the region of the foot support during normal use of the stirrup.

The one support portion and/or the sweeping portion may be pivotally mounted on the stirrup in the region of one end of the foot support portion. The one support portion may include an abutment region adapted to engage with and deflect a spring upon movement of the one support portion away from the other such portion. The spring may comprise a leaf spring or plate, which spring may extend from the side of the foot support portion from which the other upwardly extending portion extends towards the side of the foot support from which the one upwardly extending portion extends.

The invention may be carried into practice in various ways, but one embodiment will now be described by way of example, with reference to the accompanying drawings, in which:-

75 Figure 1 is a side view showing the stirrup in the normal position of use;

Figure 2 is a side view showing the stirrup in a position in which a foot has been expelled;

80 and Figure 3 is a section through the line III-III of Figure 1,

Figure 4 is an underneath view of Figure 2.

As shown in Figure 1, the stirrup comprises a platform 10 from one side of which a curved arm 12 extends, the arm 12 terminating over the centre of the platform and being provided with an opening 14 through which a strap extending from a saddle may extend in order to fasten the stirrup on to the saddle. From the other side of the platform 10 a curved member 16 extends upwardly, the upper end of which a member 16 is provided with a spigot 18 which fits into a recess 20 formed in the end of the curved arm 12 (as shown in Figure 1).

In the position shown in Figure 1, the stirrup functions in the same way as a conventional stirrup in that the foot of a rider can be supported on the platform, with the arm 12 and member 16 providing abutments for the foot of the rider in order to prevent the foot from slipping off the stirrup.

The curved member 16 is pivotally mounted on the platform 10 about an axis 22. Integral with the curved member 16 is a tongue 24 which, in the positions shown in Figures 1 and 3, extends across the platform between two parallel sides 26. The upper surface of the tongue 24 and the upper surface of the sides 26 are generally co-extensive and are provided with a chequered and serrated contour respectively in order to enhance the grip of a rider's boot with the stirrup.

Extending beneath the tongue 24 from the side of the platform from which the arm 12 extends, is a spring plate, or leaf spring 28. The plate 28 extends beneath the axis 22 of the curved member 16, right to the edge of the stirrup.

Should a rider become unseated from his animal, and should his boot or leg become trapped in the stirrup, then the leg exerts an outward force on the curved member 16 to cause it to pivot in a clockwise direction about the axis 22. As the curved member 16

The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

starts to pivot outwardly, so the tongue 24 moves upwardly towards the position shown in Figure 2 to ensure that any foot or leg trapped in the stirrup is pushed out by the tongue to free the rider from the stirrup.

During the initial outwards movement of the curved member 16, a bearing surface 30 on the curved member 16 bears against, and deflects the spring 28 downwardly whereby the spring acts to resist the initial opening movement of the curved member 16. Once the bearing surface 30 has passed beneath the axis 22, the spring 28 then acts on the bearing surface 30 to assist in the outwards movement of the curved member 16.

It will be appreciated that the stirrup can easily be returned from the position shown in Figure 2, to that shown in Figure 1 merely by grasping the curved member 16 and causing it to pivot back into place. The abutting faces of the curved member 16 and the arm 12, in the position shown in Figure 1, are co-extensive whereby the arm 12 and member 16 provide a smooth joint.

It will be appreciated that the force exerted by the spring to oppose the initial movement of the curved member away from that position shown in Figure 1 is sufficient to prevent the curved member from inadvertently opening during normal use of the stirrup.

CLAIMS

1. A stirrup including a foot support and, in use, upwardly extending portions from either end of the foot support, the stirrup being capable of being suspended from a location remote from the foot support, one of the upwardly extending portions being moveable away from the other upwardly extending portion.

2. A stirrup as claimed in Claim 1 capable of defining a complete enclosure.

3. A stirrup as claimed in Claim 1 or 2 in which movement of the one upwardly extending portion away from the other upwardly extending portion is arranged to be against a resilient bias.

4. A stirrup as claimed in Claim 3 in which the movement of the one upwardly extending portion away from the other upwardly extending portion is initially against a resilient bias and, once the one upwardly extending portion has moved a predetermined distance, it is arranged to be biased away from the other upwardly extending portion.

5. A stirrup as claimed in any preceding claim including a sweeping portion arranged to move through the space normally occupied by a foot located on the foot support when the one upwardly extending portion moves away from the other such portion.

6. A stirrup as claimed in any Claim 5 in which the sweeping portion is located in the region of the foot support.

7. A stirrup as claimed in Claim 5 or 6 in which the foot support and the sweeping portion are separate.

8. A stirrup as claimed in any of Claims 5 to 7 in which the one upwardly extending portion is pivotally mounted in the region of one end of the foot support.

9. A stirrup as claimed in any of Claims 5 to 8 in which the sweeping portion is pivotally mounted in the region of one end of the foot support.

10. A stirrup as claimed in Claim 8 and 9 in which the one upwardly extending portion and the sweeping portion are constrained to move with each other.

11. A stirrup as claimed in any preceding claim in which the one upwardly extending portion includes an abutment region arranged to engage with and deflect a spring upon movement of the one upwardly extending portion away from the other upwardly extending portion.

12. A stirrup as claimed in Claim 11 in which the spring comprises a leaf spring.

13. A stirrup as claimed in Claim 11 or 12 in which the spring comprises a plate.

14. A stirrup as claimed in any one of Claims 11 to 13 in which the spring extends from the side of the foot support from which the other upwardly extending portion extends towards the side of the foot support from which the one upwardly extending portion extends.

15. A stirrup substantially as herein described with reference to, and as shown in the accompanying drawings.

Printed in the United Kingdom for Her Majesty's Stationery Office by the Tweeddale Press Group, 8991685, 6/87 18996. Published at the Patent Office, 25 Southampton Buildings, London WC2A 1AY, from which copies may be obtained.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.